

What is Claimed is:

1. A steerable catheter comprising an elongated catheter body secured to a proximal handle and having a distal end carrying at least one functional element,

5 a unitary spring structure for steering said distal end comprising at least two orthogonally arranged flattened sections bendable normal to flattened planes of said sections,

10 said flattened sections being axially displaced along the length of said spring structure thereby comprising a proximal flattened section and a distal flattened section,

15 at least one steering wire being attached to each flattened section to apply bending forces thereto,

20 a coil spring having a hollow interior lumen extending along the length of said catheter body, a distal end of said coil spring being affixed to said proximal flattened section,

25 at least one steering wire extending distally from said distal end, said wire being attached to said distal flattened action for application of bending forces thereto, said steering wire having a proximal end connected to means in said handle for application of pulling forces of said wire, and

at least one steering wire being attached to said proximal flattened section for exertion of bending forces thereon.

2. A steerable catheter comprising an elongated catheter body secured to a proximal handle and having a distal end carrying at least one functional element,

5 a distal steering assembly which includes

a section containing a preshaped wire, said wire being biased to bend said assembly into a curvilinear shape in a first plane, and

10 a second steering mechanism independent from said preshaped wire which enables bending said assembly in a second plane that is non-parallel to the bending plane of the preshaped section.

3. A catheter according to claim 2 wherein said preshaped wire is located proximally to said second steering mechanism.

4. A catheter according to claim 2 wherein said preshaped wire is contained within an introducer tube for introduction into a living body, wherein said introducer tube retains said preshaped wire in a generally linear orientation.

5. A catheter according to claim 1 wherein said unitary spring structure comprises two orthogonally arranged segments which are soldered together to form said unitary structure.

6. A catheter according to claim 1 wherein a pair of steering wires is attached to each of said orthogonally arranged flattened sections.

7. A catheter according to claim 1 wherein a guide tube containing at least one of steering wires is attached to a proximal one of said flattened sections.